

REPORT ON MACHINERY.

No. 52707

THUR. APL 18 1907

Port of Newcastle

Received at London Office

19

Survey held at Newcastle

Date, first Survey Nov 7

Last Survey

Apr 13 1907

(Number of Visits 3)

on the

S/S "Katuna"

Tons Gross 4641

Net 2907

When built 1907

Built at Newcastle By whom built Armstrong Whitworth & Co. Ltd

made at Newcastle By whom made Wallsend Slipway & Co. Ltd when made 1907

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Horse Power 478 Owners Bucknall Bros Ltd Port belonging to London

Horse Power as per Section 28 468 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

VES, &c.—Description of Engines In C & D No. of Cylinders 3 No. of Cranks 3

Cylinders 24 45 45 Length of Stroke 48 Revs. per minute 64 Dia. of Screw shaft as per rule 15 7/8 Material of screw shaft as fitted 15 7/8

screw shaft fitted with a continuous liner the whole length of the stern tube yes Is the after end of the liner made water tight

propeller boss yes If the liner is in more than one length are the joints burned If the liner does not fit tightly at the part

the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive yes If two

are fitted, is the shaft lapped or protected between the liners Length of stern bush 5' 5"

Tunnel shaft as per rule 13 3/4 Dia. of Crank shaft journals as per rule 13 5/8 Dia. of Crank pin 14 1/2 Size of Crank webs 29 1/2 x 9 3/4 Dia. of thrust shaft under

14 1/2 Dia. of screw 18 ft. Pitch of Screw 18 ft. No. of Blades 4 State whether moveable yes Total surface 110 sq. ft.

Feed pumps 2 Weir's Diameter of ditto 7 x 9 1/2 Stroke 21 Can one be overhauled while the other is at work yes

Bilge pumps 2 Diameter of ditto 4 3/4 Stroke 24 Can one be overhauled while the other is at work yes

Donkey Engines 3 Sizes of Pumps 8 x 9 8 7 1/2 x 4 1/2 7 6 x 6 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 4 of 32 In Holds, &c. No. 1. 2. 3. - 2 of 32

4. 2 of 32. One lowell. 3 1/2. Tunnel well. 3

Bilge Injections 1 sizes 8 Connected to condenser, or to circulating pump CR Is a separate Donkey Suction fitted in Engine room & size yes 3 1/2

all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes Are the sluices on Engine room bulkheads always accessible

all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks both

they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yes Are the Discharge Pipes above or below the deep water line above

they each fitted with a Discharge Valve always accessible on the plating of the vessel yes Are the Blow Off Cocks fitted with a spigot and brass covering plate yes

all pipes are carried through the bunkers none How are they protected

all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes

the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yes

Tests of examination of completion of fitting of Sea Connections 30/1/04 of Stern Tube 30/1/04 Screw shaft and Propeller 30/1/04

the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from top platform

MILERS, &c.—(Letter for record S) Manufacturers of Steel Spencer and Sons Ltd

Total Heating Surface of Boilers 6504 Is Forced Draft fitted yes No. and Description of Boilers 3 S. ended

Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 11-1-04 No. of Certificate 7404

in each boiler be worked separately yes Area of fire grate in each boiler 58.5 sq. ft. No. and Description of Safety Valves to

each boiler 2 Spring Area of each valve 11.04 Pressure to which they are adjusted 185 lb Are they fitted with easing gear yes

smallest distance between boilers or uptakes and bunkers or woodwork 2 feet. Mean dia. of boilers 14' 3 3/8 Length 11' 6" Material of shell plates S

thickness 1 5/16 Range of tensile strength 28-32 Are the shell plates welded or flanged ends Descrip. of riveting: cir. seams 2.7 1/2

ing. seams 2.7 1/2 Diameter of rivet holes in long. seams 1 3/8 Pitch of rivets 9 1/2 Lap of plates or width of butt straps 20 1/2

per centages of strength of longitudinal joint rivets 89.6 Working pressure of shell by rules 206 Size of manhole in shell 16" x 12"

Size of compensating ring McNeil's No. and Description of Furnaces in each boiler 3 Monsons Material S. Outside diameter 3' 9 1/8

Length of plain part top Thickness of plates crown 9 1/2 Description of longitudinal joint weld No. of strengthening rings

bottom Thickness of plates bottom 16 1/2 Working pressure of furnace by the rules 192 Combustion chamber plates: Material S. Thickness: Sides 5/8 Back 5/8 Top 5/8 Bottom 15/16

Pitch of stays to ditto: Sides 8 x 7 1/4 Back 8 x 7 1/8 Top 7 1/2 x 7 1/4 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 220

Material of stays S Area Diameter at smallest part 1.45 Area supported by each stay 59 Working pressure by rules 193 End plates in steam space

Material S Thickness 1 1/4 Pitch of stays 15 1/2 x 14 How are stays secured d nuts Working pressure by rules 230 Material of stays S

Area Diameter at smallest part 5.24 Area supported by each stay 210 Working pressure by rules 250 Material of Front plates at bottom S

Thickness 1 1/4 Material of Lower back plate S Thickness 1 5/16 Greatest pitch of stays 13 3/16 Working pressure of plate by rules 217

Diameter of tubes 2 1/2 Pitch of tubes 3 1/2 x 3 5/8 Material of tube plates S Thickness: Front 1 1/2 Back 3/4 Mean pitch of stays 7 1/2

Pitch across wide water spaces 13 Working pressures by rules 212 Girders to Chamber tops: Material S Depth and

thickness of girder at centre 8 1/2 x 1 1/2 Length as per rule 30 1/2 Distance apart 7 1/2 Number and pitch of stays in each 3 of 7 1/2

Working pressure by rules 188 Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked

separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed

Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

VERTICAL DONKEY BOILER— Manufacturers of Steel

No.	Description				
Made at	By whom made		When made	Where fixed	
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate	Fire grate area	Description of Safety
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted	Date of adjustment	
If fitted with easing gear	If steam from main boilers can enter the donkey boiler		Dia. of donkey boiler	Length	
Material of shell plates	Thickness	Range of tensile strength	Descrip. of riveting long. seams		
Dia. of rivet holes	Whether punched or drilled	Pitch of rivets	Lap of plating	Per centage of strength of joint	
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.	Dia. of stays	
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates	Description of joint	
Working pressure of furnace by rules	Thickness of furnace crown plates		Stayed by		
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied :— 1 set connecting rod bolts & nuts. 2 Main bearing bolts & nuts. 1 set of coupling bolts & nuts. Set of valves for Weir's pumps. 1 set of bilge pump valves. propeller & shaft. nuts bolts and assorted iron.

The foregoing is a correct description,

FOR THE WALES & ENGINEERING CO. LIMITED.
Manufacturer.

Dates of Survey while building	During progress of work in shops—	1906 Nov 7, 16, 28, 29 Dec 3, 11, 12, 31 1907 Jan 7, 8, 9, 11, 14, 15, 16, 23, 30, 31 Feb 6, 8, 9, 13, 22, 27 Mch 1, 4, 5, 6, 15, 19	Is the approved plan of main boiler forwarded herewith	46
	During erection on board vessel—	20, 22, 25, Apr 4, 13		
	Total No. of visits	38		

Dates of Examination of principal parts—		Cylinders 28. 11. 06.	Slides 12. 12. 06.	Covers 12. 12. 06.	Pistons 14. 12. 06.	Rods 13. 12. 06.
Connecting rods 12. 12. 06.	Crank shaft 16. 10. 04.	Thrust shaft 8. 1. 07.	Tunnel shafts 8. 1. 07.	Screw shaft 11. 12. 06.	Propeller 11. 12. 06.	
Stern tube 16. 1. 07.	Steam pipes tested 14. 10. 06.	Engine and boiler seatings 26. 2. 07.	Engines holding down bolts 1. 3. 07.			
Completion of pumping arrangements 21. 3. 07.	Boilers fixed 26. 2. 07.	Engines tried under steam 22. 3. 07.				
Main boiler safety valves adjusted 22. 3. 07.	Thickness of adjusting washers PB 5/16 5/16 CB 5/16 5/16 SB 3/4 4 Set					
Material of Crank shaft S	Identification Mark on Do. L.R. 4/07	Material of Thrust shaft L.R.	Identification Mark on Do. L.R.			
Material of Tunnel shafts S	Identification Marks on Do. L.R.F.	Material of Screw shafts S	Identification Marks on Do. L.R.F.			
Material of Steam Pipes M. J.	Test pressure 540 lbs.					

General Remarks (State quality of workmanship, opinions as to class, &c.)

Machinery and boilers built under Special Survey. Material and workmanship good and efficient. Engines and boilers examined under steam and safety valves adjusted. In my opinion this vessel is eligible for the record of L. M. C. 4. 07.

It is submitted that this vessel is eligible for THE RECORD. LMC 4.07

F.D. ELEC. Light

The amount of Entry Fee..	£ 3 : : :	When applied for,	17 APR 1907
Special	£ 43 : 8 : :	When received,	20 APR 1907
Donkey Boiler Fee	£ : : :		
Travelling Expenses (if any) £	: : :		

Committee's Minute

Assigned

FRI. APL 19 1907

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



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MACHINERY CERTIFICATE WRITTEN